REMARKS

Claims 1-17 are all the claims pending in the application. Claims 1-4, 6, 7, 9, 10, and 13 stand presently rejected under 35 U.S.C. § 103(a) as being unpatentable over Iwasaki (US Patent No. 6,034,712) in view of Maeda (JP 4-284484). Further, claims 11 and 12 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Iwasaki in view of Maeda and further in view of Oku (JP 4-284484). In addition, claims 14-17 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Iwasaki in view of Maeda and Yamakawa (US Patent No. 5,923,358). Finally, claims 5 and 8 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

A brief summary of exemplary embodiments of the present invention can be found on pages 3 and 4 of Applicants' Amendment filed November 14, 2002. Applicants point out that independent claim 1 recites "a diffusion device for diffusing rays from said light emitting elements to equalize luminance of rays from each light emitting element."

The grounds of rejection in item 2 of the present Office Action allege that the Iwasaki reference discloses all the limitations of claim 1, except for the claimed diffusion device. However, according to the grounds of rejection, Maeda discloses the claimed diffusion device (diffusion plate 15).

However, Applicants note that there is no teaching or suggestion in the Iwasaki and Maeda references, or elsewhere in the prior art made of record, that would have motivated a

person of ordinary skill in the art to incorporate Maeda's diffusion plate 15 into the system taught by Iwasaki.

Specifically, Applicants point the Examiner to the mask 13 shown in, e.g., Figure 1 of the Iwasaki reference. As taught in the reference, the mask 13 has a plurality of pinholes 12 formed opposite the light emitting elements (LEDs) 7, 8, and 9, through which light from the LEDs is projected onto the photosensitive medium 37.[1] Therein, the surface of the mask 13 that is opposed to the substrate 1, is subjected to reflection-free treatment. Thus, light not passing through the pinholes 12 of the mask 13 can be absorbed, and this is useful for the prevention of stray light.[2] Thus, there is no deterioration of the image quality.[3]

In other words, the reference teaches a specific purpose or function of the structure of the mask 13 in Iwasaki's system, namely to pass light through the pinholes 12, and to absorb light that does not pass through the pinholes 12 in order to prevent the occurrence of stray light. Therefore, it is not apparent how or why a person of ordinary skill in the art would have been motivated to incorporate a diffusion device, such as Maeda's diffusion plate 15, into Iwasaki's system; or how or why a person of ordinary skill in the art would have been motivated to substitute Iwasaki's mask 13 with Maeada's diffusion plate 15. The function of the mask 13 would be destroyed.

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[1] See Iwasaki reference, col. 4, ln. 9-42

[2] See Iwasaki reference, col. 5, ln. 53-57

[3] See Iwasaki reference, col. 10, ln. 63-67

For at least these reasons, Applicants submit that independent claim 1 is patentable over the prior art made of record.

Independent claims 14 and 16 both recite "a diffusion device for diffusing rays from said light emitting elements." Both claims are among the claims rejected under 35 U.S.C. § 103(a) as being unpatentable over Iwasaki in view of Maeda and Yamakawa, as stated in item 4 of the present Office Action. However, as discussed above, the combination of Iwasaki and Maeda is not proper. Thus, patentability arguments analogous to those discussed above in connection with the patentability of claim 1 apply to claims 14 and 16 with equal force, regardless of whether or not the teachings of Iwasaki or Maeda can be properly combined with the teachings of Yamakawa, as alleged in the grounds of rejection.

The dependent claims are patentable at least by virtue of dependency from their respective independent claims. In addition, claims 5 and 8 are patentable for independent reasons, as indicated in item 5 of the present Office Action.

In addition, the Examiner states that the pinholes 12 taught in the Iwasaki reference limit the heading directions of the rays from the light emitting elements. However, the rays radiate divergently after passing through the pinhole. Therefore, the pinhole does not have a function to limit the heading directions of the rays. The pinhole, in the same way as a stop, controls the amount of light, or limits regions where the rays pass through. When the rays that passed through the pinhole reach and exposure surface, an image becomes much larger than the size of

the pinhole. Accordingly, when the pinhole is used singly, the image on the exposure surface becomes unsharp.

Since the pinhole cannot control the heading direction of the rays, a converging lens system is disposed between the pinhole and the exposure surface. This converging lens system converges the diffusion rays passed through the pinhole to make the image the same size as that of the pinhole or smaller. Thus, the image on the exposure surface becomes sharp.

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,

Peter Ahlberg Reg. No. 38,157

Paul F. Neils
Registration No. 33,102

SUGHRUE MION, PLLC
Telephone: (202) 293-7060
Facsimile: (202) 293-7860

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Date: April 23, 2003